

RECEIVED
CENTRAL FAX CENTER

DEC 14 2007

PTO/SB/97 (04-07)

Approved for use through 09/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Certificate of Transmission under 37 CFR 1.8

USPTO Fax No.: (571) 273-8300

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office

on December 14, 2007
Date
Signature

Ann F. Griffith

Typed or printed name of person signing Certificate

(302) 992-3249

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of transmission, or this certificate must identify each submitted paper.

10/728334
AD6932USNA
Applicants' Reply BriefPage 1 of 6

This collection of information is required by 37 CFR 1.8. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.5 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER

IN THE APPLICATION OF:

HIROYUKI SUMI ET. AL.

CASE AD6932USNA
NO.:

SERIAL NO.: 10/728334

GROUP ART UNIT: 1796

FILED: DECEMBER 04, 2003

EXAMINER: SATYA B. SASTRI

FOR: FLAME RESISTANT POLYESTER RESIN COMPOSITION

DEC 14 2007

APPLICANTS' REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The Applicants' Reply Brief is filed in response to the Examiner's Answer mailed November 1, 2007 and supplemented by mailing on November 23, 2007.

Application No.: 10/728334
Docket No.: AD6932USNA

Page 2

Status of Claims

Claims 1-16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Harashina et al. (WO 01/48086) in view of Takahashi et al. (US 4,742,109). Claim 17 was previously canceled. The appealed claims are Claims 1 – 16.

Application No.: 10/728334
Docket No.: AD6932USNA

Page 3

Grounds of Rejection to be Reviewed Upon Appeal

Whether claims 1-16 are unpatentable under 35 U.S.C. 103(a) over Harashina et al. (WO 01/48086) in view of Takahashi et al. (US 4,742,109).

Application No.: 10/728334
Docket No.: AD6932USNA

Page 4

Argument

Appellants highlighted that the compositions of the present invention possess unique combination of properties in that they are simultaneously flame retardant, laser weldable, and have good impact resistance.

In the answer of November 1, 2007, Examiner contends that such properties would necessarily be present when the prior art references of record are combined.

The primary reference (Harashina et al) discloses compositions comprising polyester resins with improved flame retardancy through the use of phosphorous-containing phosphazene compound and phenolic resin combination, wherein each component in the combination may be present in amounts of 1-40 parts by weight per 100 parts of polyester resin. The reference further discloses that other flame retardants may be optionally included in the compositions. The amount of polyester, phosphorous-containing flame retardant, phenolic resin is within the presently claimed range of Claims 1 and 2. The Harashina reference does not teach 1 to 25 % by wt, based on the total weight of the composition, of thermoplastic acrylic polymer.

The prior art to Takahashi et al (4,742,109) is in an analogous field and recognizes that the addition of flame retardants to polybutylene terephthalate resins to mitigate the flammability of PBT results in a decrease in impact resistance and extensibility of the molding composition. The prior art teaches overcoming such a disadvantage by adding 0.1 to 20 wt % of polyacrylate resin to the PBT resins.

Examiner further states: In essence, Harashina et al., teach that phenolic resin in the compositions helps maintain impact strength of polyester resin and Takahashi et al teach that polyacrylate-based impact modifier, helps improve the impact resistance and extensibility of the polyester composition. Examiner then concludes that the primary and secondary reference, both teach two different additives for improving the mechanical strength of flame-retardant polyester resins, and thus it would have been obvious to one of ordinary skill to use the combination of the two additives to arrive at the presently claimed invention.

However, Appellants herein emphasize that the Harashina reference **does not teach**, as contended by examiner, that phenolic resin in the compositions helps maintain the impact strength of the polyester resin. Harashina, Col. 2, lines 12-15 states "the flame-retardant resin composition comprises a flame retardant comprising a phosphazene compound and a phenolic resin." Throughout the reference the

Application No.: 10/728334
Docket No.: AD6932USNA

Page 5

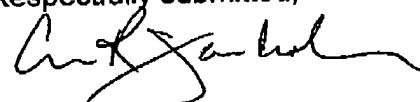
phenolic resin is associated with a part of the flame retardant component; and not an impact modifier, as suggested by the examiner. Col. 2, lines 5 – 7 state "that a polyalkylene terephthalate resin can be rendered highly flame-retardant without deteriorating mechanical properties;" implying that the mechanical properties are inherently associated with the polyester resin. Thus, examiners contention that the phenolic of Harashina and the polyacrylate of Tagahashi serve similar purposes and thus it would have been obvious to use a combination of the two additives, is not born out in the Harashina reference.

Furthermore, what compels one or ordinary skill in the art to combine the two references, when the problem at hand, that is, providing a unique combination of properties having simultaneously flame retardant, laser weldable, and good impact resistance, is not addressed by either reference? The Harashina reference, demonstrates good impact resistance, without the need for an additional impact modifier. So, why would one add an impact modifier to arrive at Appellants claim 1. There is no reasonable expectation that such a combination would give a composition having the desired laser weldable properties inherent in Appellant's Claim 1 composition.

For the foregoing reasons, claims 1-16 are allowable over the references of record and a decision consistant therewith is respectfully solicited.

If any fees are required please charge deposit account no. 04-1928, E.I. DuPont de Nemours and Company.

Respectfully submitted,



ARNE R. JARNHOLM
ATTORNEY FOR APPLICANTS
Registration No.: 30,396
Telephone: (302) 992-2394
Facsimile: (302) 992-3257

Dated: 12-14-07

T:\Patent Documents\DOCKET NO. FOLDERS\AD\AD69XX\AD6932\Applicants' Reply Brief.doc